

## TABLE-BASED SCHEDULER FOR FIFOs AND THE LIKE

### ABSTRACT

5 A scheduler for a set of data packet storage devices (e.g., FIFOs) implements a scheduling  
algorithm embodied in a look-up table (LUT) that identifies the next FIFO to select for service based on  
the current status of the FIFOs. In one embodiment, in addition to a memory device used to store the  
LUT, the scheduler has (1) a latch adapted to store and forward the LUT output and (2) an extractor that  
implements a finite state machine that determines (1) when to enable the latch and (2) when to forward  
the identification of the next FIFO to select for service to the set of FIFOs. Using a LUT enables  
10 relatively complicated scheduling algorithms to be implemented for relatively large numbers of FIFOs  
without significantly increasing the execution time of the scheduler.